

## Unit 6 Lesson 1B HW

Verify each identity.

$$1. \frac{\cos x}{1 + \sin x} + \frac{1 + \sin x}{\cos x} = 2 \sec x$$

$$2. \frac{\sin x}{1 + \cos x} = \frac{1 - \cos x}{\sin x}$$

$$3. \frac{\csc^2 x - 1}{\csc^2 x} = \cos^2 x$$

$$4. \sec x - \sec x \cdot \sin^2 x = \cos x$$

$$5. \cos^2 \theta - \sin^2 \theta = \cancel{2\cos^2 \theta} 1 - 2\sin^2 \theta$$

$$6. \frac{\sec x - \csc x}{\sec x + \csc x} = \frac{\tan x - 1}{\tan x + 1}$$

$$7. 1 - \frac{\cos^2 x}{1 + \sin x} = \sin x$$